

## The New Media Ecosystem

What it means for journalism, news products, and media business models

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- **I'm honored by the opportunity to speak here tonight.** As one of the world's greatest publishing companies, I know you will have a significant impact on the future of media in general and the future of news in particular.
- **Newspapers found their way into my blood well before I was able to read one.** From the time I could walk I would visit my dad in the press rooms of the Providence Journal, in Providence, Rhode Island, where he was head of the machine shop.
  - I was addicted to the smell of the ink and paper. Enthralled with the noisy rhythm of the presses. I would inevitably return home grimy and ink-stained with yet one more folded newspaper hat fashioned by a gap-toothed typesetter trying to be nice to "Louie's boy".
  - I remember my dad heading off to Germany in the early 1960's to learn how to install and maintain a new set of Heidelberg presses. I learned from my dad a love for tools tools and machines and the joy of making things.
  - My dad is now in his 90's. He has never understood what it is I do for a living. Not a clue. He may be proud but it's a blind pride. He's never used a computer.
  - The only time he showed a glint of fascination rather than puzzlement was when I told him I was president of a small company that was creating the on-demand coffee-table books that Apple introduced a decade or so ago. I showed him a sample book. He smelled the ink. He felt the paper. He pronounced it good. It made me feel even better.
  - My 92-year-old mom, on the other hand, juggles her iPad and prowls the social networks, eager to keep up with kids, grandkids, great-grandkids, and friends.
- **About me (adjust based on how I'm introduced)**
  - **While I have been a CEO, a publisher and even an editor-in-chief a few times, I consider myself a technologist. I develop and architect products.**
    - I have been working in the online space since the days of "steam-powered modems" -- having launched my first online news product in 1980 via the technology of broadcast teletext

- I have spent a third of a century working in the fields of new media
    - the first on demand media - teletext
    - the first iterations of online community - eWorld
    - the first use of broadband networking in US - @Home
    - various approaches to establishing technology-driven layers of trust - eWorld and in founding a certified email company, Goodmail.
  - **The common thread is a long fascination with technology platforms that enable others to express themselves.**
- **None of this means I have all the answers.** Far from it.
  - All it means is that as a technologist and entrepreneur I can reasonably make the claim that I've made **more mistakes than anyone else in this room.**
  - And with that, I might have attained a few insights into the architecture of media ecosystems and their rapid evolution over the last thirty years.
  - And also, to realize that if one doesn't know the answers, it is **wise to focus on identifying the right questions.**
- **These are extraordinary times.** Yes, there has been tremendous disruption but let's consider the huge positives that underlie that disruption:
  - First and foremost, there are **no longer any barriers to publishing** -- everyone has a printing press -- a basic fact we cannot underplay. There are no gatekeepers -- except where governments take restrictive action. Anyone can publish. Though of course, having the ability to publish doesn't mean everyone else has the responsibility to listen to you.
    - We have more voices participating than ever before. We have more publishing than ever before. That does not mean it's all high-quality expression. However, if one looks at things statistically, which I tend to do, and assume that wheat-to-chaff ratios stay reasonably the same, then we have more good content as well. It might be hard to find in all that chaff, but it is there.
  - Indeed, this new ecosystem raises the very basic question of **who is a journalist? Who is a purveyor of news?** Those of us who believe strongly in constitutional press freedoms know that openness of the press goes hand-in-hand with the lack of definition of that term. We are all journalists. We

are all publishers.

- **Beyond the explosion in expression**, we also have powerful new capabilities that can change what journalists and publishers do and how they do it.
  - Whether the evolution of new media forms, the ability to engage with audiences, the use of computational analysis for news reporting, or the emergence of countless new devices.
- **In my view, there is no question about whether the future of journalism will be better than its past. It's only a question of**
  - how long it takes for the full capabilities of the new ecosystem to take form
  - and how long it takes for us to become reasonably comfortable with its inherently more chaotic nature.
- **These are exciting times. Challenging, indeed. But exciting nonetheless.**
  - The media landscape is in the process of being completely reconstructed and reinvented, in ways we know, and in ways we do not yet know.
  - The process of change is far from over. Indeed, it won't ever be over. **The pace of technological change will not abate, it will only quicken.**
- **Less than six years ago, the iPhone hit the market.** Android was announced the same year and the first Android device went into stores in 2008. The world now has upwards of 1 billion smartphone users and the number is growing at 40% year over year.
  - Only three years ago, the iPad was introduced and the tablet market exploded. **150M tablets have been sold in less than 3 years; 30% of adults in the US own one.** With the introduction of lower cost Android and Nexus devices, **price points have dropped and the steep growth curves have become even steeper.**
  - In February, for the first time, the Adobe Digital Index showed tablets drawing more website traffic than smartphones -- **more website traffic than smartphones!** Stunning given the installed base of tablets is at best one-sixth the size.
  - At Google, we now see many of our products drawing more than half their traffic from mobile devices.
  - The rapid advance of new devices will continue -- whether inspired by Project Glass, or smart watches or other wearable even discardable screens and devices.

- I'm not compelled by recent discussions regarding the role of the 2nd screen. We are quickly moving into a realm of **3rd, 4th and 5th screens, the nth screen**, each introducing variations in use cases based on the context of each device.
- **The post-PC world is upon us and along with it further change in media consumption habits.** When we look at recent behavior on new devices, we learn, from studies from Pew and other research organizations, that more news is being consumed than ever before. It is consumed throughout the course of the day and from a far broader array of sources. And, of crucial importance, it is consumed via new modes of discovery.
- **One cannot develop a coherent sense of the evolution of media and news products,** and their attendant business models, without understanding how the flows of audiences and their methods of discovery and engagement have changed.
- **In the first decade of the web, the biggest new influence on audience behavior was search.** It allowed users to not only satisfy their spontaneous informational whims but also to discover new sources and new voices in the process. As a result, there are few websites that seek search traffic that don't find **25-30% of their inbound unique audience coming from search engines.**
- **Then came the blogosphere and its various publishing-platform cousins. It not only introduced many new voices,** it filled the link economy with a fabric of sites and audiences rich with referral links -- referral links that easily constituted another 15-20% of the share of inbound unique traffic.
- **Then a new dimension of discovery and subsequent audience flow began with social.** Like the dramatic impact of emerging devices, the impact of the social layer has been equally quick, hugely important, yet stunningly nascent.
  - After only five years, social is having an impact on content discovery and subsequent flows of audience that equals if not exceeds that of search. It's quite the norm to see socially-aware websites finding **25-35% of their inbound unique traffic** coming from social networks.
- When considering the role of the social layer it's important to note that **the history of social networking is, at best, at the beginning of chapter two.** There is much, much more innovation waiting to happen.

- **We certainly recognize that at Google with our efforts on Google+**
  - We are excited by the prospects;
  - We are fascinated by what we are learning
  - We are eager to continue to try new things, to explore new arenas.
- **One realization is that social is not just about Friends and Family. It's also about people you don't know but should know.**
  - Just as Google News uses algorithms to find, cluster, and present news in near real-time, we are now using algorithms to identify and harvest interesting and popular posts, then mapping those posts to the interests of individual users – thus enabling them to discover new people, new communities, new experiences, new brands.
  - I started my career decades ago in the comparatively simplistic era of television programming. In 1974 we strategized about programming and counter-programming against a TV media matrix that only had four networks.
  - Now, in a practice I call programming programming, we are combining the use of computer programs along with the basic concepts of media programming to drive discovery over an **unlimited matrix of content and audiences, connecting dots along the social graph, the interest graph, the time and event graph, the functional graph, civic graph, the geo-graph.**
- **When we study the flows of audiences,**
  - when we parse the means of media discovery,
  - when we consider the impact of search,
  - when we consider the impact of the blogosphere and its extensions (Tumblr, Pinterest),
  - when we consider the impact and evolution of the social layer,
  - we see a dramatically different ecosystem than that of the 50's, 60's, 70's 80's, 90's. It is not an ecosystem that is driven by the distribution of branded packages of content (newspapers, magazines, etc) that were dropped on our doorsteps.
  - It is an ecosystem where the atomic unit has shifted: away from the packaged collection of content (the magazine, the newspaper, the website). **The new atomic unit of content is the story. That is what gets passed around via referrals, found via search, discovered by a friendly social recommendation.**
  - Audience flows have changed so significantly that many media sites who

saw 50-60% of inbound uniques coming to their home pages are now seeing a number that is closer to 25%.

- Let me be clear. While a publisher wants the raw number of loyal users visiting his site directly to grow, the 75% coming to the site from elsewhere represent today's marketing and discovery funnels. You want the cumulative number of loyal home page visitors to grow at the same time growing the flow of new inbound visitors. This new marketing funnel is the replacement for the newsstand presence that publishers paid for, for the news-boxes that publishers paid for, for the promotional circulations that dropped free copies on waiting-room tables and airline seats.
  - This funnel has significant monetary value beyond surfacing new prospects for the brand. Last year, the NAA valued the average visit to a news site at 27 cents. While the initial visit of a new user may be worth less than that, let's say 10 cents, 5 cents or a penny. Pick your number. Just the 6B visits per month driven by Google News globally brings great and immediate monetary value.
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- Before I talk further about the future of the media ecosystem, and as much as I believe the future is all we should be thinking about, **I'd like to touch on a bit of historical context.**
    - **Here in the United States, there are many who believe that the challenges facing journalism are all about the business model**, and more importantly, that somehow the foundation of the prior journalistic era, the newspaper business model, was so long standing that it was **etched on tablets brought down by Moses**. This is not the case.
      - Before I go further here I should note that my analysis is US-based. I don't have the same intimacy with the German newspaper industry. One key difference is that US newspapers have generally had a higher percentage of revenue coming from advertising than via paid circulation.
      - However, I believe the underlying ecosystem dynamic crosses international boundaries.
    - **In the United States, newspapers historically were not tremendously profitable.** There was tremendous competition. Most cities had multiple papers. New York had dozens. Most large cities had 4, 5 6 or more from varying viewpoints, focus, and quality. It was a tough business. In each market, the largest circulation paper did well, a few others did okay, and the

remainder struggled.

- **But something significant happened in the late 1940's. Television was introduced.** Television ad revenues grew rapidly from zero to nearly 20% of the entire advertising market over the course of its first decade. A huge portion of that revenue came at the expense of newspapers. They quickly went from owning 37% of the advertising market to 25% and further downward from there.
- **As a result, we saw a steady decline in the number of newspapers,** from 5 down to 1, in some cases 2 with a joint operating agreement approved by the US Justice Department. We went from having a rich set of voices to having only a few. From democratic perspective, this was not a good thing.
- However, for the newspapers left standing **it marked the introduction of a 40-year period of extraordinary profitability.** The survivors went from fighting for every ad dollar to having near monopolistic control over local ad pricing. They had tremendous distribution leverage and, appropriately, used it to fullest advantage.
- **Then the story gets more interesting, and gets to the true lesson of this bit of media history: which is the huge impact that the underlying distribution environment has had on the design of a media product -- and it's attendant business model.**
- That golden era in the United States of near-monopoly newspapers stimulated a dramatic expansion of the newspaper product itself to be one of all-things-to-all-interests -- or at least those interests that made economic sense with their large circulation audiences.
  - Lifestyle sections, Gardening sections, Automotive sections, Food sections, Fashion sections, etc, etc etc. Beyond the fattening of the classified cash cow, it was these “soft” news sections that drove increased profitability.
- **Then, in the 1990's, the internet happened. With the onset of the Internet's open distribution, the landscape began to change dramatically.** With that open distribution came the potential for many new voices -- from Craigslist to Monster.com, from Salon to HuffPo, from a million blogs to a billion social posts.
  - From a standpoint of democratic principles, would anyone really want to flip back the clock on that one?
- **That change in distribution and the attendant shift in the media landscape**

**challenges the validity of the old product model.** It's core approach does not translate to the new media ecosystem. All-things-to-all-people portals have become irrelevant as the Web has matured and spawned thousands of media products focused on nearly as many niche audiences.

- I learned this lesson at Salon. I launched some additional soft sections and quickly found that I was competing for ad dollars with a dozens of sites that were focussed solely on those areas.
- To me this suggests the benefit of considering: **does one look at transforming an existing brand into this new ecosystem or does one analyze each market segment and determine what is the appropriate product and brand for that opportunity?** -- whether it be highly-commercial opportunities in employment listings, large audience opportunities in sports, or targeted offerings in areas ranging from politics to public policy to parenting? Do you break the umbrella brand into component parts, each with its own suitable approach to the product experience and to the business model.
- **The change in the underlying distribution architecture and its impact on product and business model is only one aspect of the extraordinary revolution** that is currently playing out.
  - The entire ecosystem is different. Every part of it, from way it is consumed, to the ways it is distributed, to the tools that can be used for reporting and gather information, to the media forms that can be used to express it.
- **In light of these dramatic changes it becomes necessary to rethink every facet of the media model.** I'm not suggesting that everything MUST change, but that a comprehensive rethinking is a necessary and valuable intellectual process.
  - We owe it to ourselves, we owe it to the ongoing success of our enterprise, we owe it to the importance of our journalist mission to consider and reconsider all options, all opportunities for positive change.
  - **Frankly, that re-thinking, that re-creation will happen whether we want it to or not.** It will happen because young innovators and entrepreneurs will approach these opportunities with no baggage, no old models to protect. Their canvas will be fresh and clean. Existing players are challenged, if not crippled, by the need to eat their own young. Entrepreneurs bear no such burden.
- **Rethink everything. That's what must happen. That's what will happen.** Let's

look at several key dimensions:

- **What is the nature and purpose of a website when most of the inbound traffic comes from search and social?**
  - As I've noted, the audience flows have shifted dramatically. If the home page traffic is typically 25% of inbound audience, then where is the 75% of inbound traffic is going? **To story pages!**
  - These are the pages that serve the vital role of embracing new visitors, selling them on the brand's attributes, and converting them to regular visitors. Yet, when redesigning a site most of the attention is focused on the home page because it is believed to be the front door to the brand, when in truth a site's new guests are visiting not through the front door but through all the side doors.
- **What is the right approach to subscription models in this varied media ecosystem?**
  - While there are clear opportunities for paid content, I personally believe the opportunities for subscription revenue from mainstream media content is far less obvious and far more nuanced.
  - The approach of the New York Times was a wise one. Not that they have necessarily found each and every answer. I know they haven't. But that they have crafted a platform that gives them the fine-tuned ability to adjust many knobs and dials.
- **How do we approach content architecture in an edition-less medium with a near limitless capacity for storage and accessibility?**
  - The architecture of news content has barely changed, particularly as practiced by traditional media outlets. It continues to mirror the edition-oriented nature of the prior medium form -- streams of articles that appear one day and drop into the archive the next.
  - Should we not explore and adopt new approaches that maintain the full expression of a reporter's efforts on a given story or beat in one place behind a persistent URL? I say a persistent URL because as Wikipedia and others have proven, the persistent URL builds value over time in the link economy.
  - "Digital First" needs to be more than a catchphrase. It must drive a deep rethinking of our product models and behaviors.
  - Can we not make far better use of that highly-capitalized content

rather than dropping it into the archive, or what newspapers in the U.S. call the morgue, which is clearly where content goes to die?

- **What is the evolution of the narrative article form in a medium dominated by updates, bullet points, and posts?**

- As Marshall McLuhan said, “Every new medium begins as a container for the old.” While early radio news began with the reading of newspaper articles, that model was quickly superseded by a shorter crisper style that was appropriate to the radio medium.
- I’m not suggesting that the long-form is dead, but I am asking what is the right form to convey knowledge in a rich media ecosystem increasingly oriented toward short bites of content consumed throughout the day on mobile devices.
- Can we learn from the approach of sites like ProPublica who create a series of social posts, each disclosing an additional nugget of journalistic wisdom, each dropping a different piece of bait for further engagement.

- **How can we take better and full advantage of computational journalism?**

- One major technological impact is the opportunity to use computer science to assist with reporting efforts, to parse massive data sets, to monitor public sources of data.
- Can investigative journalism aggressively leverage computational journalism to not only help with stories but eventually become persistent, automated investigative reports?
- We have only seen the earliest modest efforts in computational journalism. The potential is huge.

- **What tools does a journalist need to have?**

- What new tools are now necessary given we have effectively no limit on publishing capacity, no technical barriers to realtime publishing, and the full opportunity to accommodate multiple forms of media? How might we support reportorial efforts such that it is easier to gather large amounts of info and use that information to good effect.
- Since our medium can accommodate the full expression of the reporter’s work, and since those reporters are our most precious capitalized resource, is there not huge value in developing new tools

to support a reporter's efforts? Who out there will drive the creation of Reporter's Notebook 2.0?

- **What is the right approach to organizational workflow?**
  - What is appropriate given current and future advances in how news is gathered, organized and presented in a virtual, do-anything-from-anywhere, 24/7 medium?
  - What is the job definition of a reporter, of an editor, of a computational journalist as the underlying models change?
- **What is the role of a reporter in a medium that not only enables audience engagement but requires it and rewards it?**
- **What steps to media organizations take to leverage the assistance of the trusted crowd?** Is this not a crucial skillset in a media environment where audience engagement is key and audience contributions can bring real asset value?
- **How do we create work cultures of constant innovation?**
  - Again, the pace of technological change will not abate. To think of today as a period of transition from one point of media stasis to another is deeply unwise.
  - How do we staff media organizations with the appropriate resources and the appropriate mindsets such that constant innovation is imbued into the organization's DNA and into the role of each and every participant?
  - The approach I am wary of is the creation of a Chief Innovation Officer within a company -- unless the sole focus of that role is the creation of a pervasive culture of innovation. Otherwise it suggests that innovation only occurs in certain roles rather than being part of each and every role.
    - Companies that do this well, for instance Apple and Google, are constantly pushing innovation in every corner of their enterprises. Apple thinks out of the box about the box! Google builds cool features but then spends as much if not more innovating on an infrastructure that can offer those services to our users with greater speed and improved cost-efficiency. We design our data centers from the ground up.

- Innovation is not just about a sexy new user interface. **It's not just about what we produce, it's also about how we produce it.**  
Innovation is about taking risks and trying things. Mistakes will be made. That's a good thing. That's where true learning happens.
- **We need to rethink everything, including the approach to transformation in and of itself.**
  - **I now think of transformation as a dangerous word.**
  - Transformation inherently involves compromise. It involves bridging the past to the future, and it often results in innovations that are crucial for the future being diluted by an understandable, but dangerous, bias towards past experience.
  - The result is incrementalism when the future demands a 10x change in thinking.
- **There are many, many questions. None of them are easy. But I don't see how one can effectively address the new ecosystem without giving each question it's due consideration.** There are not singular answers. The answers will vary based on where one focuses their analysis within this massive new media matrix.
- I honestly cannot see this emerging era as anything but **a renaissance of creativity in media and its associated technologies.** All the numbers, all the data, all the experience of the last fifteen years points in that direction. It will not come without challenges. It will not occur without further disruptions. It will not evolve without ongoing innovation. But it will happen.
- **I also have no doubt that media companies such as yours will continue to find great opportunity and success in the new digital realm.** You have already shown such success.
- But I would also suggest that for all of us, **the new ecosystem brings new higher-level challenges and, indeed, responsibilities.**
  - Technology may have value, but it has **no intrinsic values**. It can always be used for good or for ill.
  - **Among the many powers of the Internet is its ability to provide support for any opinion, any belief, any fear and give it greater volume.**
  - Sadly, political players, interest groups, and yes, media outlets, know all too well

- that **affirmation sells far better than information.**
- In this country, cable television was once thought to have great theoretical potential for news and journalism. But it has been an extraordinary disappointment, descending into a constant stream of programming that is cynically confrontational and entirely devoted to its perceived entertainment value.
  - **Our societies' needs for credible journalistic knowledge and wisdom has never been greater.** While the evolution of the web has been hugely beneficial, it also raises the bar on any effort to parse truth from falsehood, wisdom from spin.
    - How can we address that -- not only with innovation in our own journalistic approaches to building trust and credibility, but in opportunities to organically leverage the ecosystem itself? Is there a possibility of finding truth in the numbers?
  - **Yes, we live in interesting times** -- likely far more interesting than any of us had ever expected. We have a future to mold. May we, as leaders, find **excitement**, and **passion**, and **creativity** in addressing these new challenges and harvesting these new opportunities.
  - And in doing so, **may we inspire the same in others.**

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